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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/528,111	03/16/2005	Hiroshi Koyama	3273-0201PUS1	9042
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BIRCH STEWART KOLASCH & BIRCH PO BOX 747 FALLS CHURCH, VA 22040-0747			EXAMINER HU, HENRY S	
			ART UNIT 1713	PAPER NUMBER
			NOTIFICATION DATE 08/10/2007	DELIVERY MODE ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

mailroom@bskb.com

TH

Office Action Summary	Application No. 10/528,111	Applicant(s) KOYAMA ET AL.	
	Examiner Henry S. Hu	Art Unit 1713	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on Election of May 23, 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-13 is/are pending in the application.
- 4a) Of the above claim(s) 1-11 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 12 and 13 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☒ Claim(s) 1-13 are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date <u>3-16-2005</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. It is noted that Applicants' **IDS** (1 page) and **Pre-Amendment** both filed on March 16, 2005 was received. **Claims 4, 7 and 11-12 were amended**, while no claim was cancelled or added. Such an amendment on claims is only to remove the improper multiple to multiple claim dependency. It is also noted that this US Application is from **PCT/JP04/08846** filed on June 17, 2004.

2. This Office Action is in response to **Election** filed on May 23, 2007. **Applicant's election of Group V with Species (2) (Claims 12-13) is traversed with remarks on pages 2-3.** The traversal is on the ground(s) that it would not place an undue burden to search and examine the non-elected Group I (Claims 1-4), Group II (Claim 5), Group III (Claim 6), and Group IV (Claims 7-11) with the elected Group V since they are so closely related in the field of photoresist so that search and examination of entire application can be made without a serious burden. This is not found persuasive because each group is drawn to a technology apparently requiring search in different classification area.

In a very close examination, **each group is distinct from other group.** For instance, Group I was drawn to **monomer**, each of Group II and Group III was drawn to **process of making monomer**, Group IV was drawn to **polymer**, while each of Group V was drawn to **a photoresist resin composition** comprising at least the polymer (of Group IV) and a photo acid

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generator. Although fluorinated monomer units from Group I are indeed containing in each of Group II, Group III, Group V and Group V as a major component; each group still has different scope, process of making and process of using.

3. According to international search report and Examiner's prior art search, monomers in **Group I** can be easily prepared by different chemistry other than the process of **Group II or III** by reacting a compound (4a) or (4b) respectively with a fluoroalkylating agent (5). Based on the same rationale, the same reaction in process Group II or III can be used to prepare materially different monomers other than Group I. Monomer in **Group I** being distinct from polymer in **Group IV** is based on the fact that the individual property of monomers will not be shown in its polymers mainly due to tremendous difference in molecular weight. Furthermore, polymer described in **Group IV** and its application to make photoresist composition in **Group V**, international search report also has shown at least some prior art anticipates the polymers comprising such a monomer unit in Group I.

The requirement for this PCT is still deemed proper and is therefore made FINAL. **Claims 1-13** with a total of three independent claims (**Claims 1, 5 and 6**) are now pending, while non-elected **Groups I-IV (Claims 1-11)** are all withdrawn from consideration. An action follows.

Claim Rejections - 35 USC § 102

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4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(c) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

5. The limitation of parent **Claim 12** in present invention relates to **a photoresist resin composition**, comprising two components including: (A) **at least the polymeric compound** as claimed in Claim 7 and (B) **a photo acid generator**, wherein Claim 7 is related to **a polymeric compound** having a repeated unit corresponding to a fluorine-atom-containing polymerizable unsaturated-monomer described in Claim 1. **Applicants have elected species (2) for formula (1b).**

See other limitations of dependent Claim 13.

6. **Claims 12-13** are rejected by each of **seven** references as: (A) under 35 U.S.C. 102(b) as being anticipated by **Kamiya et al. (JP 2002-006501)**, (B) under 35 U.S.C. 102(a) as being anticipated by **Hatakeyama et al. (US 6,579,658 B2)**, **Tachibana et al. (US 6,660,448 B2)**, **Sasaki et al. (JP 2003-345018)**, or **Mizutani et al. (JP 2003-280202)**, or (C) under 35 U.S.C. 102(e) as being anticipated by **Komoriya et al. (US 6,858,760 B2** with a US effective

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filing date of February 21, 2003) or **Abdourazak et al. (US 6,919,160 B2** with a US effective filing date of February 20, 2003).

Regarding **photoresist resin composition** of parent **Claim 12 with elected species (2) for formula (1b)**, each of **seven** references including **Kamiya, Hatakeyama, Tachibana, Sasaki, Mizutani, Komoriya and Abdourazak** has **individually** disclosed the preparation of the claimed photoresist resin composition comprising such a polymer having formula (1b) along with such a photo acid generator. The polymers are obtained by copolymerization of the key **1b** monomer with at least one co-monomer.

7. To be more specific, see **Kamiya** at page 1-(III), page 4 at middle, page 7-(III and IIIa), page 8-(VIII, X and XII), and page 12 at paragraph 0063 for monomers with formula 1b.

See **Hatakeyama** at column 3, line 52 – column 4, line 2; pages 18-24 for monomers with formula 1b; see column 4, line 3-8 for photoacid generator.

See **Tachibana** at column 19, line 1-52 for monomers with formula 1b; see column 1, line 29-46; column 29, line 5 – column 34, line 49 for photoacid generator.

See **Sasaki** at page 11-(II-2, II-3, III-2 and III-3) for monomers with formula 1b.

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See **Mizutani** at page 13-(F-5, F-6, F-7 and F-8) and page 14 at column 25, line 12-22 for monomers with formula 1b.

See **Komoriya** at column 8, line 40 – column 9, line 28 for monomers with formula 1b; see column 64, line 42 – column 7, line 27 for photoacid generator.

See **Abdourazak** at column 3-9 for monomers with formula 1b; see column 8, line 54-67 for photoacid generator.

Therefore, each reference anticipates current limitation of parent Claim 12.

8. Regarding the claimed process of producing a semiconductor in dependent **Claim 13**, the disclosure from each reference along with the references cited therein would have anticipated such a process starting from such a composition. For instance, see **Abdourazak** at column 11, line 5-50.

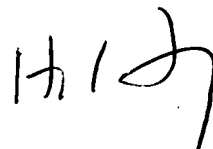
Conclusion

9. Any inquiry concerning this communication or earlier communication from the examiner should be directed to **Dr. Henry S. Hu** whose telephone number is (571) 272-1103. The examiner can be reached on Monday through Friday from 9:00 AM –5:00 PM.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Wu, can be reached on (571) 272-1114. The **fax** number for the organization where this application or proceeding is assigned is **(571) 273-8300** for all regular communications.


Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Henry S. Hu

Patent Examiner, Art Unit 1713, USPTO

August 4, 2007


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